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**Declarations under Rule 4.17:**

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(54) Title: **METHODS FOR IDENTIFYING LARGE SUBSETS OF DIFFERENTIALLY EXPRESSED GENES BASED ON MULTIVARIATE MICROARRAY DATA ANALYSIS**

(57) Abstract: The present invention provides multivariate methods for identifying differentially expressed genes based on microarray expression data. An improved random search procedure involving certain probability distances is provided. The methods of this invention implement a successive elimination procedure to remove smaller subsets resulted from each step of the random search thereby establishing a larger set of differentially expressed genes.

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